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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,898	11/26/2003	Michael Conrad	07781.0118-00000	6296
22852	7590	10/23/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			LIN, SHEW FEN	
			ART UNIT	PAPER NUMBER
			2166	

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/721,898	<b>Applicant(s)</b> CONRAD ET AL.	
	<b>Examiner</b> Shew-Fen Lin	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

- a. This action is taken to response to amendments and remarks filed on 8/4/2006.
- b. Claims 1-9 are pending and claim 9 has been added. Claims 1, 5, and 9 are independent claims.

### ***Response to Remarks***

Applicants' remarks have been fully and carefully considered, with Examiner's responses set forth below.

#### **(A)**

1. Applicants contend that Jamil (US Patent Application Publication 2003/0233523) fails to teach or suggest, "assigning the identifier to one or more data objects," as recited in claims 1, 5 and 9, because the private storage units in Jamil are not "data objects." The Examiner disagrees with this assessment for the following reason:

As Applicants admit, the term "data object" broadly refers to any kind of data irrespective of whether the data are implemented as whole file or parts of file or fields in tables. As well known in the art, a storage device is an object comprising volumes of data, and as such, it qualifies as a "data object."

Thus, Jamil indeed teach the limitation of "assigning the identifier to one or more data objects," as shown in figure 4 and in paragraph [0044].

2. Applicants also contend that Jamil fails to teach or suggest "replicating the one or more assigned data objects from the source system to the target system if the state of the identifier is

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the third state,” as claimed, because, again, the private storage units in Jamil are not “data objects.”

The Examiner disagrees with this assessment by the same reason as explained above.

3. Applicants further contend that the Examiner improperly equated the data portions in Jamil with not only the Applicants’ claimed “identifier,” but also with the Applicants’ claimed “one or more assigned data objects.” The Examiner disagrees with this assessment for the following reasons:

First, the Examiner stated that “the Data field is the corresponding identifier field,” referring to figure 4 of Jamil.

Second, Applicants contend earlier that the “storage devices” [figure 4, 410, 420, 440 and 480] are not “data objects,” which the Examiner disagrees. Nevertheless, Applicants’ arguments are obviously based on the Examiner’s equating of the “storage devices” in figure 4 of Jamil with Applicants’ claimed “one or more assigned data objects.” Thus, Applicants not only correctly assert that the Examiner equated the data portions in Jamil with the Applicants’ claimed “identifier,” but also readily admit that the Examiner’s equating of the “storage devices” in figure 4 of Jamil with Applicants’ claimed “one or more assigned data objects.”

Therefore, the Examiner’s position regarding the merits of claims 1, 5 and 9, and those claims depending from them, remains the same as stated in the previous Office Action.

**(B)**

Applicants again contend that, because Jamil fails to teach the limitation of “said identifier is assignable to one or more data objects,” Jamil also fails to teach the limitation of “a first state,” as claimed. The Examiner disagrees with this assessment for the following reason:

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The issue of whether Jamil teaches the limitation of “said identifier is assignable to one or more data objects” has been fully addressed in Section (A) of Examiner’s response and has been shown that Jamil indeed teach the limitation of “assigning the identifier to one or more data objects,” as shown in figure 4 and in paragraph [0044].

Therefore, the Examiner’s position regarding the merits of claims 1, 5 and 9, and those claims depending from them, remains the same as stated in the previous Office Action.

**(C)**

Applicants again contend that, because Jamil fails to teach the limitation of “said identifier is assignable to one or more data objects,” Jamil also fails to teach the limitation of “a second state,” as claimed. The Examiner disagrees with this assessment for the following reason:

The issue of whether Jamil teaches the limitation of “said identifier is assignable to one or more data objects” has been fully addressed in Section (A) of Examiner’s response and has been shown that Jamil indeed teach the limitation of “assigning the identifier to one or more data objects,” as shown in figure 4 and in paragraph [0044].

Therefore, the Examiner’s position regarding the merits of claims 1, 5 and 9, and those claims depending from them, remains the same as stated in the previous Office Action.

**(D)**

Applicants again contend that, because Jamil fails to teach the limitation of “said identifier is assignable to one or more data objects,” Jamil also fails to teach the limitation of “a third state,” as claimed. The Examiner disagrees with this assessment for the following reason:

The issue of whether Jamil teaches the limitation of “said identifier is assignable to one or more data objects” has been fully addressed in Section (A) of Examiner’s response and has

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been shown that Jamil indeed teach the limitation of “assigning the identifier to one or more data objects,” as shown in figure 4 and in paragraph [0044].

Therefore, the Examiner’s position regarding the merits of claims 1, 5 and 9, and those claims depending from them, remains the same as stated in the previous Office Action.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Jamil et al. (US Patent Application Publication US 2003/0233523, hereinafter referred as Jamil).

**As to claims 1, 5, and 9**, Jamil discloses a system with methods /means / system of replicating data objects from a source system to a target system [figure 6 shows copying data object 646 from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)], comprising:

creating an electronic data element [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields], comprising a first field having an identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Data field is the corresponding identifier field] and a second field having a state of the identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Status field is the corresponding state of the identifier], wherein the state of the identifier may be set to:

a) a first state [the shared state, S], in which said electronic data element may be accessed by one or more data object processing operations [according to the M (modified), E (exclusives), S (shared) and I (invalid) protocol for maintaining coherency (paragraph 0032)] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment],

b) a second state [the exclusive dirty (ED) state], in which said electronic data element may not be accessed by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment], or

c) a third state [the modified (M) state], in which said electronic data element may not be accessed by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is not assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

assigning the identifier to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

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assigning a state to the identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment]; and

replicating the one or more assigned data objects from the source system to the target system if the state of the identifier is the third state [figure 6 shows that, when the status changes from ED to M, data object 646 is copied from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)].

**As to claims 2 and 6**, Jamil discloses comprising storing the one or more assigned data objects prior to replicating the one or more assigned data objects [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (paragraph 0054)].

**As to claims 3 and 7**, Jamil discloses comprising setting the state of the second field of the electronic data element to the second state [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment].

**As to claims 4 and 8**, Jamil discloses comprising, upon a commit of the storing of the one or more data objects, the state of the second field of the electronic data element is set to the third state [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (the modified state, i.e. third state, (paragraph 0054))]



***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a

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general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Shew-Fen Lin  
Patent Examiner



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October 19, 2006



**HOSAIN ALAM**  
**SUPERVISORY PATENT EXAMINER**